Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1 (currently amended): A nitride based light emitting diode (LED) comprising:

a substrate;

a light emitting stacked structure formed over the substrate;

a nitride based dual dopant contact layer formed over the light emitting stacked structure, the nitride based dual dopant contact layer comprising a plurality of p-type dopants and a plurality of n-type dopants; and

a transparent conductive oxide layer formed over the nitride based dual dopant contact layer.

2 (currently amended): The LED of claim 1, wherein the nitride based dual dopant contact layer is made of AlInGaN-based material, the transparent conductive oxide layer is made of ~~Iadium~~ indium-tin oxide (ITO), ~~Cadmium~~ cadmium-tin oxide, ~~Antimony~~ antimony-tin oxide (ATO), ~~Zinc~~ zinc oxide (ZnO), or ~~Zinc~~ zinc-tin oxide.

3 (currently amended): The LED of claim 1, wherein the nitride based dual dopant contact layer is formed by adding the p-type dopants and the n-type dopants together through an epitaxy growth.

4 (currently amended): The LED of claim 1, wherein the nitride based dual dopant contact layer is formed by: providing a second conductive type contact layer on the light emitting stacked structure; then providing a first conductive type contact layer on the second conductive type contact layer; and then cooling the LED through a cooling rate less than 40℃/min.

5 (currently amended): The LED of claim 1 wherein the substrate is an insulating substrate, the light emitting stacked structure ~~A light emitting diode (LED)~~ comprising:

~~an insulating substrate;~~

a buffer layer formed over the insulating substrate;

a first conductivity type contact layer ~~comprising a first upper surface and a second upper surface~~ being made of $Al_{x1}In_{y1}Ga_{1-(x1+y1)}N$ $(0 \leqq x1 \leqq 1; 0 \leqq y1 \leqq 1;$ and $0 \leqq x1+y1 \leqq 1)$;

a multiple quantum well light emitting layer formed over the first ~~upper surface~~ conductivity type nitride based contact layer, and

a second conductivity type contact layer formed over the multiple quantum well light emitting layer, the second conductivity type contact layer being made of $Al_{x2}In_{y2}Ga_{1-(x2+y2)}N$ $(0 \leqq x2 \leqq 1; 0 \leqq y2 \leqq 1;$ and $0 \leqq x2+y2 \leqq 1)$;

~~a dual dopant contact layer formed over the second conductivity type contact layer, the dual dopant contact layer comprising a plurality of p type dopants and a plurality of n type dopants;~~

~~a transparent conductive oxide layer formed over the dual dopant contact layer;~~

~~a second conductivity type electrode formed over the transparent conductive oxide layer;~~

~~and~~

~~a first conductivity type electrode formed over the second upper surface~~.

6 (currently amended): The LED of claim 5, wherein the insulating substrate is made of one material selected from a material group consisting of sapphire, $LiGaO_2$, [[or]] and $LiAlO_2$ ~~; the buffer layer is made of AlInGaN based material or II nitride based material; the second conductivity type contact layer is made of GaN, AlGaN, or InGaN; the first conductivity type contact layer is made of GaN, AlGaN, or InGaN; the transparent conductive oxide layer is made of Indium tin oxide (ITO),~~

~~Cadmium tin oxide, Antimony tin oxide (ATO), Zinc oxide (ZnO), or Zinc tin oxide; the dual dopant contact layer is made of AlInGaN based material; the n type dopants are made of Si, Ge, Sn, Te, O, S, or C; and the p type dopants are made of Mg, Zn, Be, or Ca.~~

7 (original): The LED of claim 5, wherein the multiple quantum well has r InGaN quantum wells and (r+1) InGaN barriers, each InGaN quantum well is sandwiched in between two InGaN barriers, each InGaN quantum well is fabricated by $In_eGa_{1-e}N$, and each InGaN barrier is made of $In_fGa_{1-f}N$, $r \geqq 1$, and $0 \leqq f < e \leqq 1$.

8 (original): The LED of claim 5 further comprising a first conductivity type cladding layer interposed between the first conductivity type contact layer and the multiple quantum well light emitting layer and the first conductivity type cladding layer is made of $Al_xGa_{1-x}N$, and $0 \leqq x \leqq 1$.

9 (original): The LED of claim 5 further comprising a second conductivity type cladding layer interposed between the second conductivity type contact layer and the multiple quantum well light emitting layer and the second conductivity type cladding layer is made of $Al_zGa_{1-z}N$, and $0 \leqq z \leqq 1$.

10 (currently amended): The LED of ~~claim 5~~claim 1, wherein the substrate is a conductive substrate. ~~dual dopant contact layer is formed by adding the p type dopants and the n type dopants together through an epitaxy growth.~~

11 (currently amended): The LED of ~~claim 5~~claim 10 wherein the conductive substrate is made of one material selected from a material group consisting of GaN, SiC, Si, AlN, ZnO, MgO, GaP, GaAs, and Ge. ~~dual dopant contact layer is formed through a cooling rate less than 40℃/min.~~

12-18 (cancelled).

19 (new): The LED of claim 1 wherein the nitride based dual dopant contact layer is made of AlInGaN-based material; the n-type dopants are made of Si, Ge, Sn, Te, O, S, or C; and the p-type dopants are made of Mg, Zn, Be, or Ca.